

# DOUBLE PARALLEL DISC GATE VALVE



## DOUBLE PARALLEL DISC GATE VALVE

### Double Parallel Disc Gate Valve

#### Products Design Features

Double parallel disc gate valve is a product with new structure, which has small open-and-close moment, high speed, little vibration, long performance life and reliable operation, It is mainly applied to cut-off or discharge of gas and liquid delivery pipelines.

The structural features include:

- A sealing structure consists of two parallel shutters and a wedge-tightening device it is taken to replace the traditional wedge-shaped gate valve structure;
- The components of valve sealing mechanism are separated so the sealing can retain when transmuting caused by the temperature changes, and will not jam when swelling in high temperature;
- The sealing surface of the valve adopts abrasion-resistant and anti-corrosive materials which can lengthen the performance life of the valve;
- In high temperature or pressure, the disc on inlet side can be designed in pressure relief style which can avoid abnormal pressure rising in cavity caused by temperature changes, thus to ensure used safety.
- The valve adopts full-shut structure which has good protection function and can be used in all weather.

#### Main Parameter of the Products

Serial models	TT(K)Z44WH(Y)、TT(K)Z544WH(Y)、TT(K)Z644WH(Y)、TT(K)Z744WH(Y)、TT(K)Z944WH(Y)			
	TT(K)Z64WH(Y)、TT(K)Z564WH(Y)、TT(K)Z664WH(Y)、TT(K)Z764WH(Y)、TT(K)Z964WH(Y)			
Pressure grade range	PN1.6 ~ 10.0MPa		Class 150 ~ 600	
Drift diameter range	DN50 ~ 1000mm		2" ~ 40"	
Driving manner	Hand wheel driving		Gear driving, air-operating, hydrodynamic driving and electric driving	
Scope of application	Class 150 ~ 300 (PN1.6 ~ 4.0)	Class 400 (PN6.4)	Class 600 (PN10.0)	4" ~ 36" (DN100 ~ 900mm)
	2" ~ 6" (DN50 ~ 150mm)	2" ~ 4" (DN50 ~ 100mm)	2" ~ 3" (DN50 ~ 80mm)	

Notes: Our company can provide products at customer's request.

#### Products Performance Specification

Pressure	Testing pressure at constant temperature (Mpa)				Applicable temperature	Applicable medium	
	The shell testing	The left sealing	Right sealing	Low pressure air tightness		Ordinary type	Antisulphur type
(Mpa) Nomina rating pressure (PN)	1.6	2.4	1.7€	1.7€	-29 ~ 121°C or upon the user requirement	Petroleum, natural gas, water etc. non-corrosive media	Petroleum, natural gas, water etc. containing H <sub>2</sub> S, CO <sub>2</sub> corrosive media
	2.5	3.75	2.75	2.75			
	4.0	6.0	4.4	4.4			
	6.4	9.6	7.04	7.04			
(Lb) Pound grade (Class)	150	3.0	2.2	2.2	-29 ~ 121°C or upon the user requirement	Petroleum, natural gas, water etc. non-corrosive media	Petroleum, natural gas, water etc. containing H <sub>2</sub> S, CO <sub>2</sub> corrosive media
	300	7.5	5.5	5.5			
	600	15.0	11.0	11.0			

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#### Technical Specification

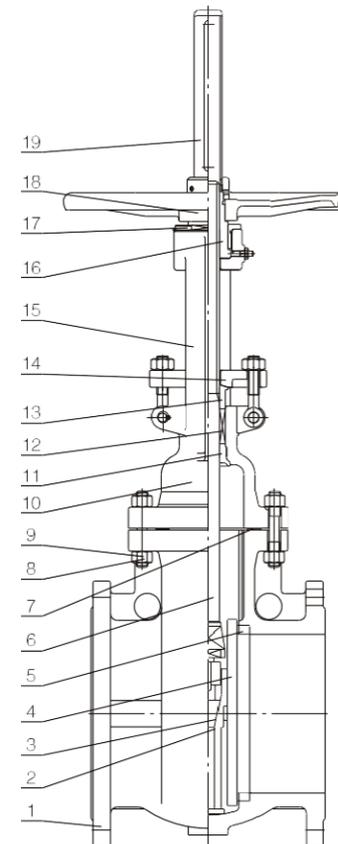
Design reference		GB	API
Design standard		JB/T5298 GB/T19672	API 6D ASME B16.34
Structural length	Flanged	GB/T 12221 GB/T19672、JB/T 5298	API 6D ASME B16.10
	Welded connection	GB/T15188.1 GB/T19672	
Flanged ends		GB/T3113 JB/T 79	ASME B16.5 MSS SP44
Butt-welding ends		GB/T 12224	ASME B16.25
Test & inspection		JB/T 9092	API 6D API 598

Note: The sizes of valve connecting flange can be designed according to customers requirement.

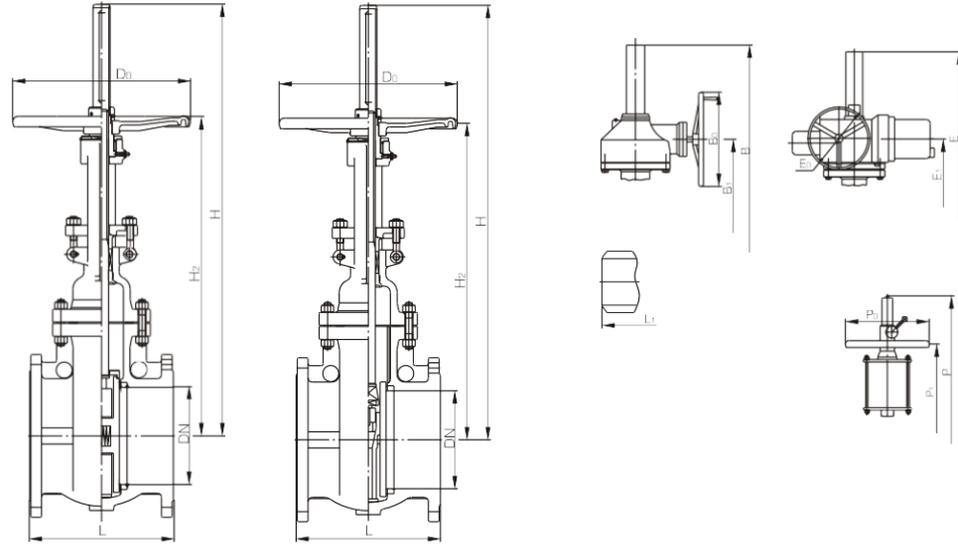
#### Major Parts Material Form

No.	Accessory name	Material			
		Ordinary type		Antisulphur type	
		GB	ASTM	GB	ASTM
1	Body	WCB	A216-WCB	WCB	A216-WCB
2	Disc frame	WCB	A216-WCB	WCB	A216-WCB
3	Wedge block	WCB+STL	A216-WCB+STL	WCB+STL	A216-WCB+STL
4	Disc	25+STL	A105+STL	1Cr18Ni9+STL	A276-304+STL
5	Seat	25+STL	A105+STL	1Cr18Ni9+STL	A276-304+STL
6	Stem	2Cr13	A276-410	1Cr18Ni9	A276-304
7	Gasket	Graphite+1Cr18Ni9	Graphite+304	Graphite+1Cr18Ni9	Graphite+304
8	Stud	35CrMoA	A193-B7	35CrMoA	A193-B7
9	Nut	35	A194-2F	35	A194-2F
10	Bonnet	WCB	A216-WCB	WCB	A216-WCB
11	Back seat	1Cr13	A276-410	1Cr18Ni9	A276-304
12	Packing	Graphite			
13	Packing press-sleeve	2Cr13	A276-420	2Cr13	A276-420
14	Packing gland	WCB	A276-WCB	WCB	A216-WCB
15	Yoke	WCB	A216-WCB	WCB	A216-WCB
16	Stem nut	ZQA19-4	C95500	ZQA19-4	C95500
17	Gland	25	A105	25	A105
18	Hand wheel	QT400-17	A536-60-40-18	QT400-17	A536-60-40-18
19	Indicating cover	25	A105	25	A105

Note: The major parts of the valves can be designed and selected according to actual work condition or customers' specific requirement.



## DOUBLE PARALLEL DISC GATE VALVE



### Main Size of Outside

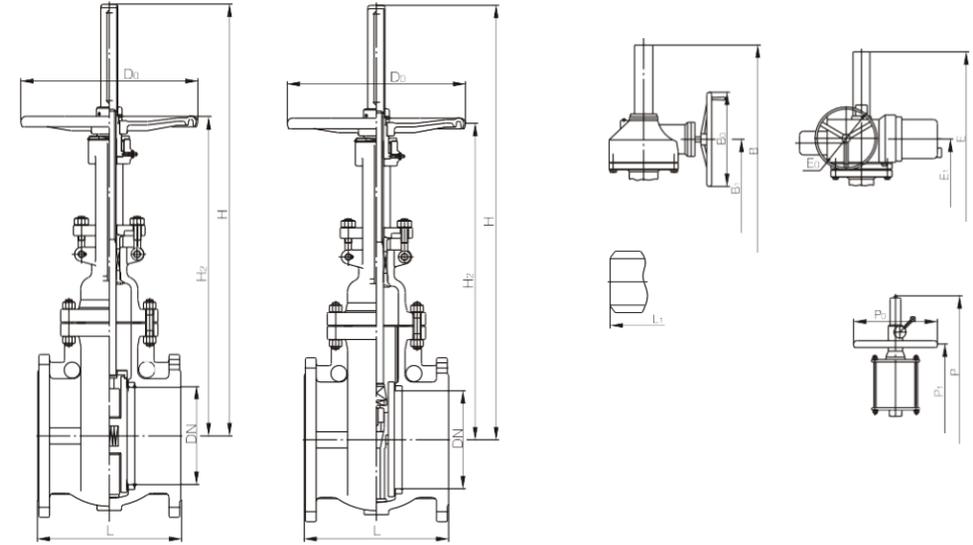
Model: (K)Z5(6, 9)4(6)4W(F, Y, D)

PN1.6, 2.5MPa PN2.0MPa

API 6D Class150

DN (mm)	NPS (in)	Flange		Butt welding L <sub>1</sub>	Hand-operated			Geared driving			Air-operating and Fluid driving			Electric driving device			Electric driving device	
		L			H	H <sub>2</sub>	D <sub>0</sub>	B	B <sub>1</sub>	B <sub>0</sub>	P	P <sub>1</sub>	P <sub>0</sub>	E	E <sub>1</sub>	E <sub>0</sub>		
		GB	API															
50	2	250	178	216	475	360	250	-	-	-	-	-	-	690	572	200	SMC-04	
65	2 1/2	280	190	241	535	425	300	-	-	-	-	-	-	747	637	200	SMC-04	
80	3	310	203	283	600	460	300	-	-	-	-	1075	820	250	812	672	200	SMC-04
100	4	350	229	305	700	535	350	-	-	-	-	1240	945	250	960	795	508	SMC-03
150	6	450	267	403	910	685	350	-	-	-	-	1400	1065	300	1170	945	508	SMC-03
200	8	550	292	419	1095	815	350	1235	900	310	BA-0	1595	1210	300	1355	1075	508	SMC-03
250	10	650	330	457	1370	965	450	1510	1050	310	BA-0	1800	1370	350	1630	1095	305	SMC-00
300	12	750	356	502	1470	1100	500	1610	1185	310	BA-0	2090	1590	350	1730	1230	305	SMC-00
350	14	850	381	572	1730	1250	600	1890	1345	460	BA-1	2420	1845	350	2020	1417	305	SMC-00
400	16	950	406	610	1870	1375	650	2030	1470	460	BA-1	2615	1995	400	2160	1532	305	SMC-00
450	18	1050	432	660	2185	1485	700	2415	1625	460	BA-2	2895	2205	500	2500	1651	305	SMC-1
500	20	1150	457	711	2335	1575	800	2565	1715	460	BA-2	3160	2405	600	2650	1741	305	SMC-1
600	24	1350	508	813	2815	1995	1000	3045	2135	460	BA-2	3885	2955	650	3130	2161	457	SMC-2
700	28	1450	610	914	-	-	-	-	-	-	-	4065	3090	700	3630	2470	457	SMC-2
800	32	1650	660	965	-	-	-	-	-	-	-	-	-	-	4135	2933	610	SMC-3
900	36	1880	813	1016	-	-	-	-	-	-	-	+	+	+	4605	3260	610	SMC-3

## DOUBLE PARALLEL DISC GATE VALVE



### Main Size of Outside

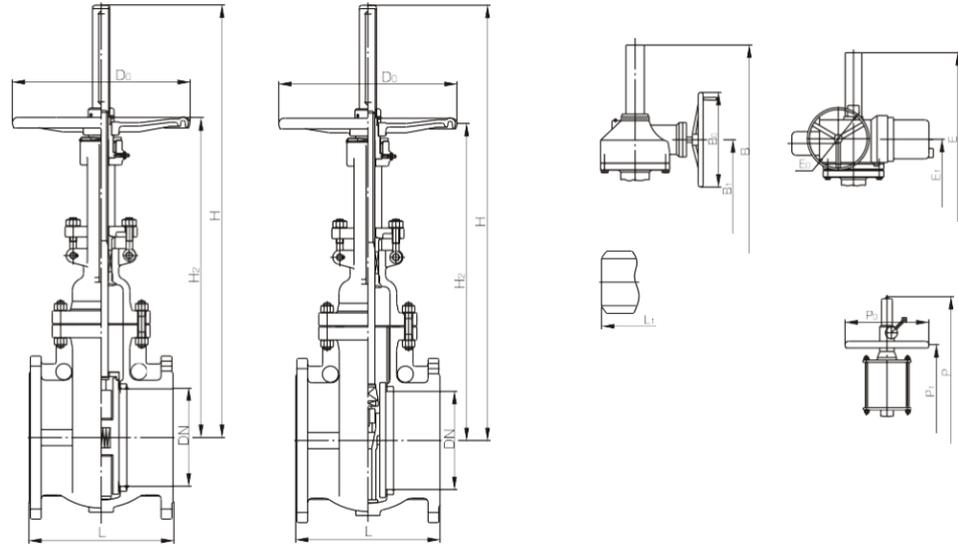
Model: (K)Z5(6, 9)4(6)4W(F, Y, D)

PN4.0MPa PN5.0MPa

API 6D Class300

DN (mm)	NPS (in)	Flange		Butt welding L <sub>1</sub>	Hand-operated			Geared driving			Air-operating and Fluid driving			Electric driving device			Electric driving device	
		L			H	H <sub>2</sub>	D <sub>0</sub>	B	B <sub>1</sub>	B <sub>0</sub>	P	P <sub>1</sub>	P <sub>0</sub>	E	E <sub>1</sub>	E <sub>0</sub>		
		GB	API															
50	2	250	216	216	475	360	250	-	-	-	-	-	-	690	572	200	SMC-04	
65	2 1/2	280	241	241	535	425	300	-	-	-	-	-	-	747	637	200	SMC-04	
80	3	310	283	283	600	460	300	-	-	-	-	1075	820	250	860	720	500	SMC-03
100	4	350	305	305	700	535	350	-	-	-	-	1240	945	250	960	795	500	SMC-03
150	6	450	403	403	910	685	350	-	-	-	-	1400	1065	300	1170	945	500	SMC-03
200	8	550	419	419	1095	815	350	1235	900	310	BA-0	1595	1210	300	1355	945	305	SMC-00
250	10	650	457	457	1370	965	450	1510	1050	310	BA-0	1800	1370	350	1630	1095	305	SMC-00
300	12	750	502	502	1470	1100	500	1610	1185	310	BA-0	2090	1590	350	1760	1257	305	SMC-0
350	14	850	762	762	1730	1250	600	1890	1345	460	BA-1	2420	1845	350	2020	1407	305	SMC-0
400	16	950	838	838	1870	1375	650	2030	1470	460	BA-1	2615	1995	400	2185	1541	305	SMC-1
450	18	1050	914	914	2185	1485	700	2415	1625	460	BA-2	2895	2205	500	2500	1651	305	SMC-1
500	20	1150	991	991	2335	1575	800	2565	1715	460	BA-2	3160	2405	600	2695	1757	457	SMC-2
600	24	1350	1143	1143	2815	1995	1000	3045	2135	460	BA-2	3885	2955	650	3175	2177	457	SMC-2
700	28	1450	1346	1346	-	-	-	-	-	-	-	4065	3090	700	3670	2606	610	SMC-3
800	32	1650	1524	1524	-	-	-	-	-	-	-	-	-	-	4136	2933	610	SMC-3
900	36	1880	1727	1727	-	-	-	-	-	-	-	+	+	+	4673	3317	610	SMC-4

## DOUBLE PARALLEL DISC GATE VALVE



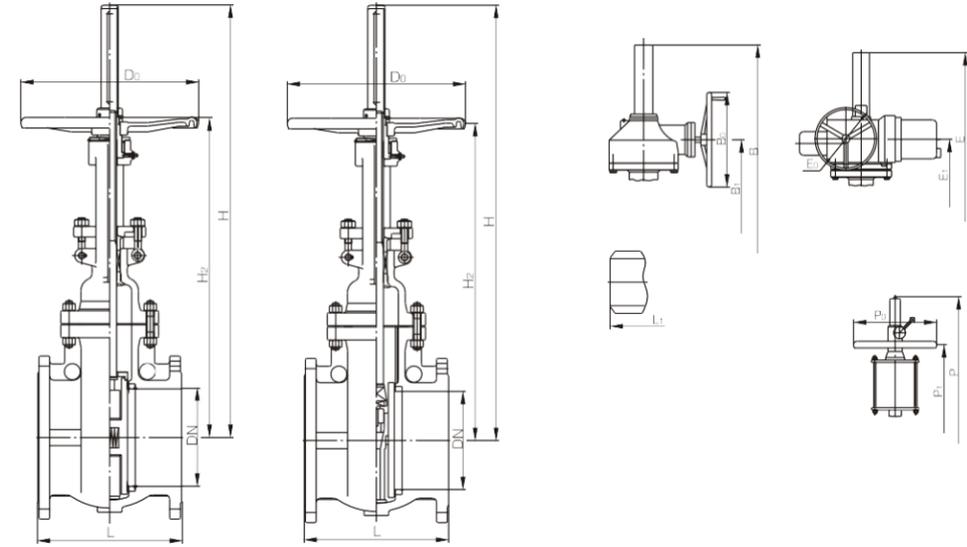
### Main Size of Outside

Model: (K)Z5(6, 9)4(6)4W(F, Y, D)

PN6.4MPa

DN (mm)	NPS (in)	Flange L	Butt welding L1	Hand-operated			Geared driving			Geared driving	Air-operating and Fluid driving			Electric driving device			Electric driving device
				H	H2	D0	B	B1	B0		P	P1	P0	E	E1	E0	
50	2	250	292	499	378	250	-	-	-	-	-	-	-	723	601	200	SMC-04
65	2 1/2	280	330	562	446	300	-	-	-	-	-	-	-	785	670	200	SMC-04
80	3	310	356	630	483	300	-	-	-	-	1130	861	250	902	756	508	SMC-03
100	4	350	406	735	562	350	-	-	-	-	1302	992	250	1007	838	508	SMC-03
150	6	450	495	956	720	350	1096	805	305	BA-0	1470	1118	300	1216	848	305	SMC-00
200	8	550	597	1150	856	400	1290	941	305	BA-0	1675	1271	300	1440	1013	305	SMC-0
250	10	650	673	1439	1013	500	1580	1098	305	BA-0	1890	1440	350	1728	1170	305	SMC-0
300	12	750	762	1545	1155	600	1705	1250	458	BA-1	2195	1670	350	1833	1312	305	SMC-0
350	14	850	826	1817	1313	650	1977	1408	458	BA-1	2542	1937	350	2131	1480	305	SMC-1
400	16	950	902	1965	1445	700	2125	1540	458	BA-1	2746	2095	400	2278	1610	305	SMC-1
450	18	1050	978	2295	1560	800	2525	1700	458	BA-2	3040	2315	500	2655	1741	457	SMC-2
500	20	1150	1054	2452	1655	1000	2682	1795	458	BA-2	3318	2525	600	2812	1836	610	SMC-3
600	24	1350	1232	-	-	-	3186	2235	458	BA-2	4080	3103	650	3356	2413	610	SMC-3
700	28	1450	1397	-	-	-	-	-	-	-	4268	3245	700	3902	2777	610	SMC-4
800	32	1650	1651	-	-	-	-	-	-	-	-	-	-	4393	3121	610	SMC-4
900	36	1880	1880	-	-	-	-	-	-	-	-	-	-	4863	3428	760	SMC-5

## DOUBLE PARALLEL DISC GATE VALVE



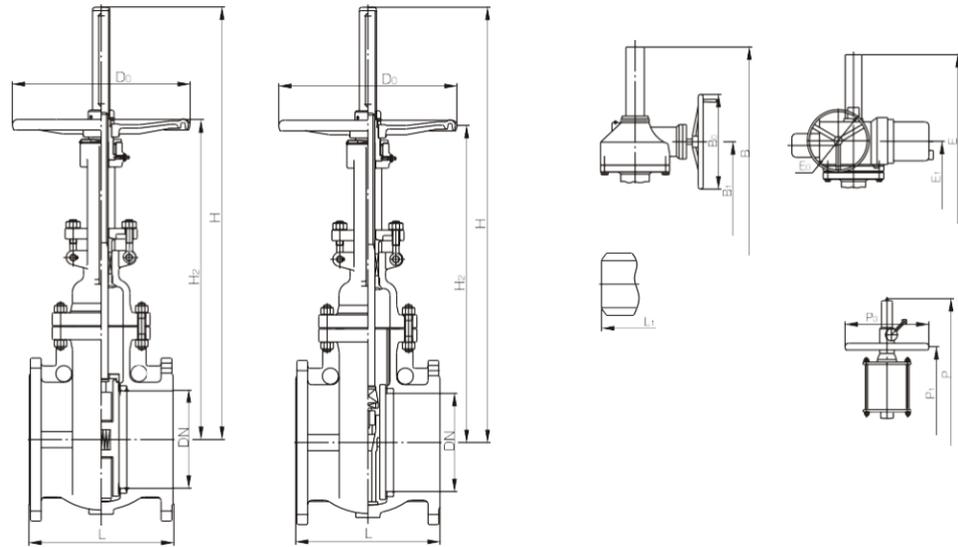
### Main Size of Outside

Model: (K)Z5(6, 9)4(6)4W(F, Y, D)

API 6D Class400

DN (mm)	NPS (in)	Flange L	Butt welding L1	Hand-operated			Geared driving			Geared driving	Air-operating and Fluid driving			Electric driving device			Electric driving device
				H	H2	D0	B	B1	B0		P	P1	P0	E	E1	E0	
50	2	292	292	499	378	250	-	-	-	-	-	-	-	723	601	200	SMC-04
65	2 1/2	330	330	562	446	300	-	-	-	-	-	-	-	785	670	200	SMC-04
80	3	356	356	630	483	300	-	-	-	-	1130	861	250	902	756	508	SMC-03
100	4	406	406	735	562	350	-	-	-	-	1302	992	250	1007	838	508	SMC-03
150	6	495	495	956	720	350	1096	805	305	BA-0	1470	1118	300	1216	848	305	SMC-00
200	8	597	597	1150	856	400	1290	941	305	BA-0	1675	1271	300	1440	1013	305	SMC-0
250	10	673	673	1439	1013	500	1580	1098	305	BA-0	1890	1440	350	1728	1170	305	SMC-0
300	12	762	762	1545	1155	600	1705	1250	458	BA-1	2195	1670	350	1833	1312	305	SMC-0
350	14	826	826	1817	1313	650	1977	1408	458	BA-1	2542	1937	350	2131	1480	305	SMC-1
400	16	902	902	1965	1445	700	2125	1540	458	BA-1	2746	2095	400	2278	1610	305	SMC-1
450	18	978	978	2295	1560	800	2525	1700	458	BA-2	3040	2315	500	2655	1741	457	SMC-2
500	20	1054	1054	2452	1655	1000	2682	1795	458	BA-2	3318	2525	600	2812	1836	610	SMC-3
600	24	1232	1232	-	-	-	3186	2235	458	BA-2	4080	3103	650	3356	2413	610	SMC-3
700	28	1397	1397	-	-	-	-	-	-	-	4268	3245	700	3902	2777	610	SMC-4
800	32	1650	1650	-	-	-	-	-	-	-	-	-	-	4393	3121	610	SMC-4
900	36	1880	1880	-	-	-	-	-	-	-	-	-	-	4863	3428	760	SMC-5

## DOUBLE PARALLEL DISC GATE VALVE



### Main Size of Outside

Model: (K)Z5(6、9)4(6)4W(F、Y、D)

PN10.0MPa

API 6D Class600

DN (mm)	NPS (in)	Flange L	Butt welding L <sub>1</sub>	Hand-operated			Geared driving			Geared driving	Air-operating and Fluid driving			Electric driving device			Electric driving device
				H	H <sub>2</sub>	D <sub>0</sub>	B	B <sub>1</sub>	B <sub>2</sub>		P	P <sub>1</sub>	P <sub>2</sub>	E	E <sub>1</sub>	E <sub>2</sub>	
50	2	292	292	499	378	300	-	-	-	-	-	-	-	723	600	200	SMC-04
65	2 1/2	330	330	562	446	350	-	-	-	-	-	-	-	821	705	508	SMC-03
80	3	356	356	630	483	350	-	-	-	-	1130	861	250	890	742	508	SMC-03
100	4	432	432	735	562	400	-	-	-	-	1302	992	250	995	690	305	SMC-00
150	6	559	559	956	720	500	1096	805	305	BA-0	1470	1118	300	1245	876	305	SMC-0
200	8	660	660	1150	856	600	1290	941	305	BA-0	1675	1271	300	1440	1013	305	SMC-0
250	10	787	787	1439	1013	650	1580	1098	458	BA-1	1890	1440	350	1753	1199	305	SMC-1
300	12	838	838	1545	1155	700	1705	1250	458	BA-1	2195	1670	350	1858	1321	305	SMC-1
350	14	889	889	1817	1313	800	1977	1408	458	BA-1	2542	1937	350	2177	1495	457	SMC-2
400	16	991	991	1965	1445	1000	2125	1540	458	BA-2	2746	2095	400	2365	1762	610	SMC-3
450	18	1092	1092	-	-	-	2525	1700	458	BA-2	3040	2315	500	2695	1877	610	SMC-3
500	20	1194	1194	-	-	-	2682	1795	458	BA-2	3318	2525	600	2922	2030	610	SMC-4
600	24	1397	1397	-	-	-	-	-	-	-	4080	3103	650	3426	2470	610	SMC-4
700	28	1549	1549	-	-	-	-	-	-	-	4268	3245	700	3983	2835	760	SMC-5
800	32	1778	1778	-	-	-	-	-	-	-	-	-	-	4485	3186	760	SMC-5